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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,310	07/31/2007	Mitsuo Nakamura	Q95853	2343
23373 7590 10/25/2010 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER				
MICHALSKI, SEAN M				
ART UNIT		PAPER NUMBER		
3724				
NOTIFICATION DATE		DELIVERY MODE		
10/25/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com
PPROCESSING@SUGHRUE.COM
USPTO@SUGHRUE.COM

Office Action Summary

Application No.

10/585,310

Applicant(s)

NAKAMURA, MITSUO

Examiner

SEAN M. MICHALSKI

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-10 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-10 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Previously, the ball bearing claims had been indicated as containing allowable subject matter. After additional search and consideration this is no longer correct, and the allowability is withdrawn. A new, non-final action follows:

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7-10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yano (US 5,846,475) in view of Hodlewsky (US 4,821,869) and Ritchey (US 1,769,546) in further view of Costanzo (US 6,494,312).

Yano discloses a rubber member conveying device (1 figure 2) including a vibration imparting part (10) that imparts vibration to a rubber member having internal strain (column 1) a conveying part which conveys the rubber (30, 10, 40 all convey they rubber) the rubber member is conveyed by the conveying member (it is a continuous piece of rubber) while being vibrated, wherein the vibration frequency is between 1-50 Hz, has an amplitude of 0.2-20mm and therefore a period of 1s- 1/50th s. The length of time the rubber will be vibrated is longer than one second, since the reference states: "according to the present invention, it is necessary to apply vibration to the extruded rubber for a duration of not less than one second."

Yano does not teach a vibrating imparting part that is integrally formed with a roller conveyor conveying part.

Hodlewsky teaches a roller conveyor including a rotating endless belt (10 figure 5) having a protruding part (32/54 figure 5) which are rollers which protrude on the outside of the belt-- which would be the rubber part loading side. Regarding claim 6, Hodlewsky further discloses the rollers axis of rotation is perpendicular to the conveyance direction.

Ritchey informs the state of the art, and discloses several pertinent facts- that it is known that rubber contracts after extrusion (page 1 lines 25-30) and that allowing the rubber to move at different speeds while being conveyed will allow the contraction (object of the invention- using cam rollers to allow for different localized speeds, page 1 lines 30-36).

The Vibration Mechanism of Yano includes rollers, which permit local changes in speed of the rubber as it contracts.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a conveyor such as Hodlewsky- having wheels and also imparting a conveying force onto the materials being conveyed and to provide it with a vibration imparting force as taught by Yano. Using a conveyor will provide more flexibility in the design of the drive of the web, since it allows the speed of the drive to be controlled during the vibration step directly, and not by upstream or downstream elements. In a combined Yano/Hodlewsky conveyor the rubber member would move because of the imparted forces from the wheeled conveyor, the revolving elements would be butted

against the rubber member (because they protrude to support the work piece) and the rubber member would move relative to the protruding part due at least to the contraction experienced by the rubber while being vibrated in accordance with Yano.

Yano does not disclose that the rollers are Ball bearings- They are clearly roller bearings or cylindrical bearings.

In the conveying arts roller bearings embedded in endless conveyors are known to be similar to ball bearings embedded in a conveyor and are considered functional equivalents. See Costanzo which discloses both cylinder rollers (figure 2a) and ball bearings (figures 7 and 8) as usable in the same roller conveyor system, and therefore as art recognized equivalent. Both styles of roller are used to provide "rolling, low friction contact" (column 2 line 24) in a conveyor application.

In the same field of invention it would have been obvious to one skilled in the art at the time of the invention to modify Yano by replacing the cylinder rollers with ball bearing rollers as taught by Costanzo. The motivation to combine is that Costanzo teaches that they are equivalent structures which would operate in a well understood manner, and they could be substituted with no undue experimentation or unexpected result.

Regarding claim 8, Yano discloses a delivery unit (33 figure 2) which delivers (to the vibrating part) a rubber with internal strain; and a cutting unit (column 6 lines 15-20) which cuts the rubber supplied by the delivery unit.

Regarding claim 9, Yano discloses the delivery unit being capable of intermittent running such that when the cut occurs the delivery unit stops delivering. This is what would happen if the system were powered down immediately after a cut- everything would stop. This is inherent in the arrangement of Yano, since powering down will always result in the claimed functionality.

Regarding claim 10, see extruder 2, 2a figure 2.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN M. MICHALSKI whose telephone number is (571)272-6752. The examiner can normally be reached on M-Th 6:30AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sean M Michalski/
Examiner, Art Unit 3724

/Kenneth Peterson/
Primary Examiner, Art Unit 3724